

03500.012127



#29  
Pat 10/15/03  
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
HIROTO OKAWARA ) Examiner: L. Nguyen  
Application No.: 08/877,728 ) Group Art Unit: 2612  
Filed: June 18, 1997 )  
For: IMAGE PICKUP APPARATUS ) September 22, 2003  
(Monday After Federal Closing)

**MAIL STOP NON-FEE AMENDMENT**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RECEIVED**  
SEP 24 2003  
Technology Center 2600

SUBMISSION OF CORRECTED FORMAL DRAWINGS

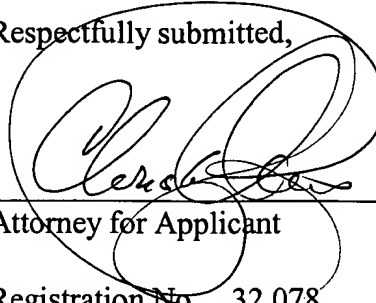
Approved  
12/22/03  
LN  
Sir:

Applicant, having received an Official Action mailed June 18, 2003, in the above-identified patent Application No. 08/877,728, hereby submits five (5) sheets of formal drawings (Sheets 1 to 3, 12 and 13 of 32) that incorporate all necessary changes requested by the Examiner. Applicant requests that the accompanying sheet be substituted for the corresponding sheet in the official file.

Applicant believes that no fees should be incurred in connection with filing this paper. However, the Commissioner is authorized to charge any fees associated herewith to Deposit Account No. 06-1205.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Charles C. Harper", is written over a horizontal line.

Attorney for Applicant

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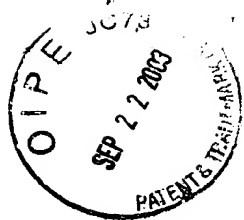
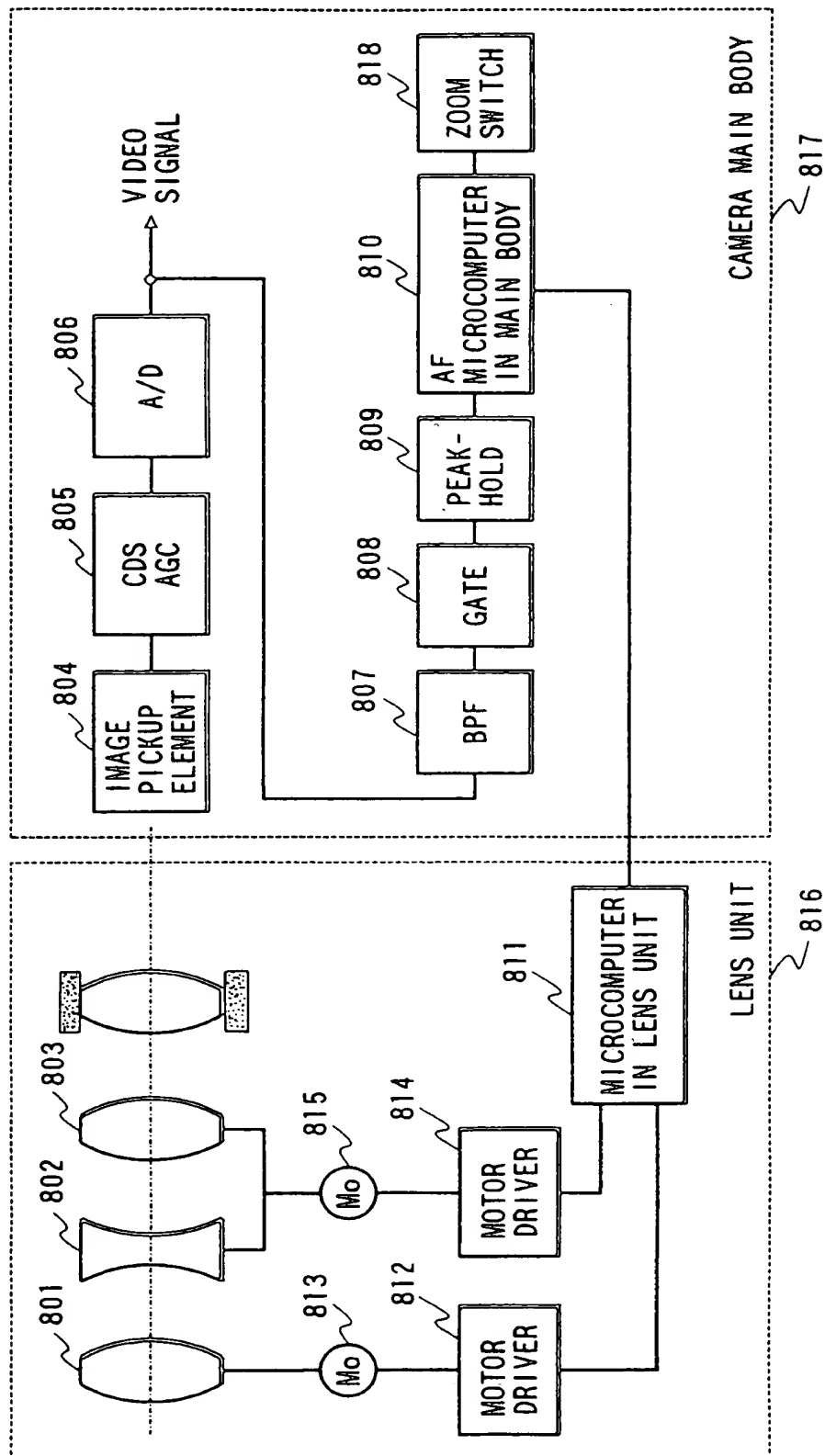
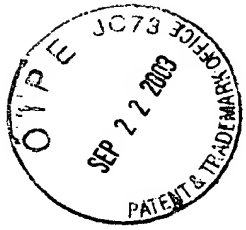
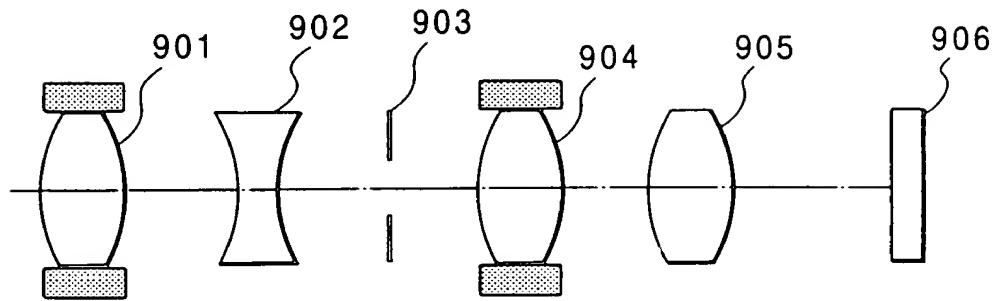


FIG. 1  
PRIOR ART

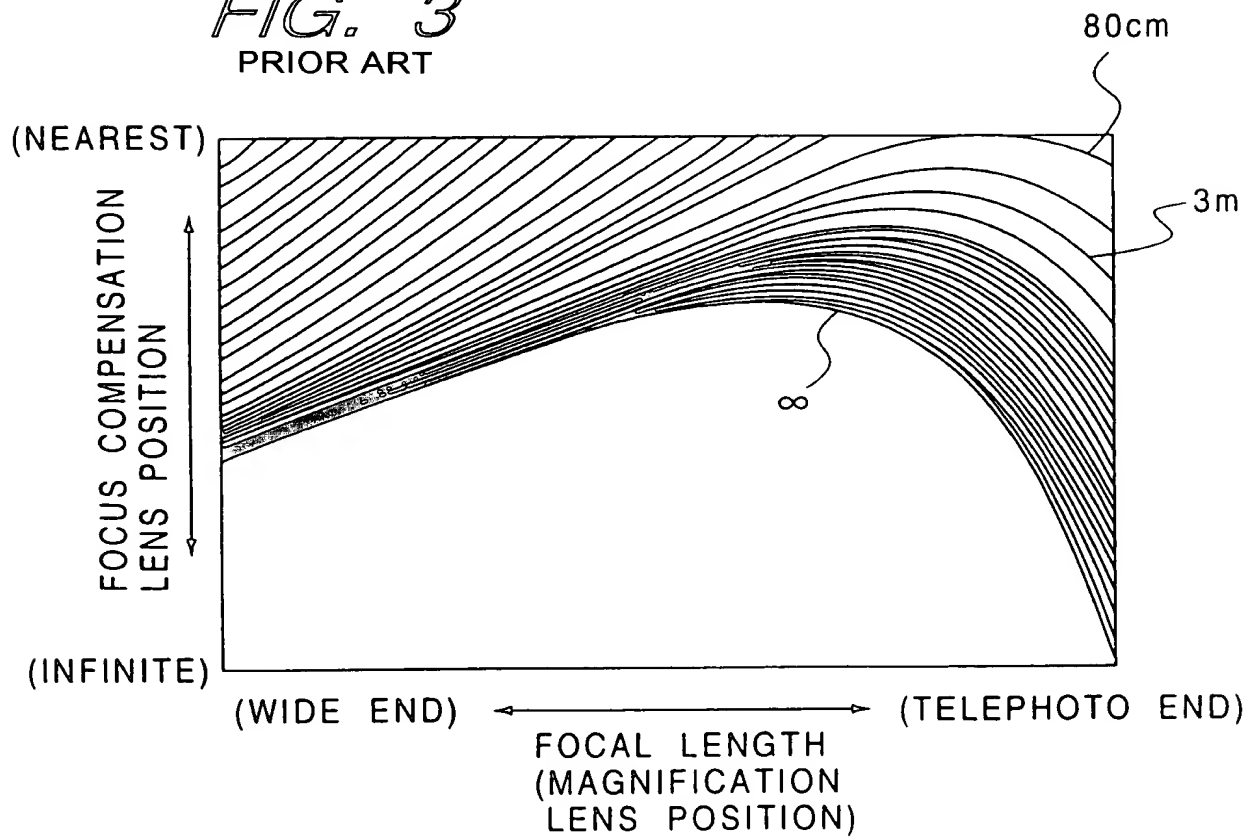




*FIG. 2*  
PRIOR ART

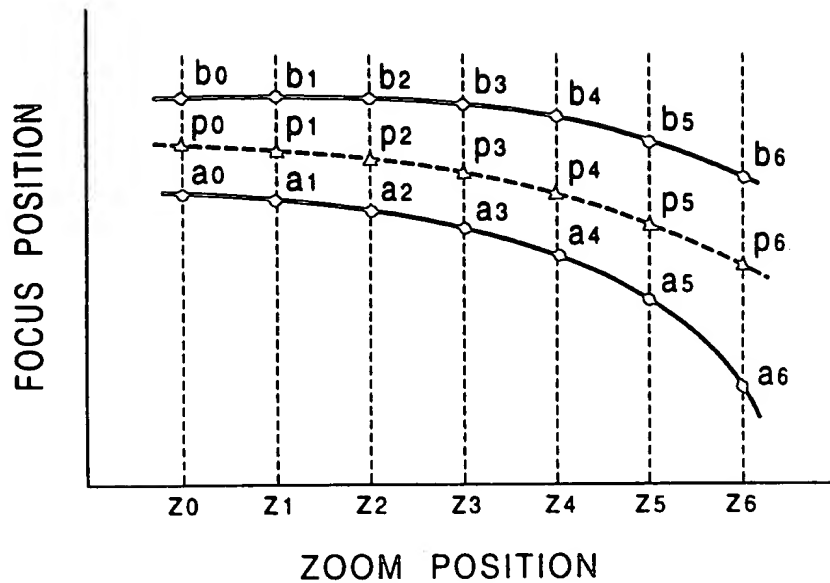


*FIG. 3*  
PRIOR ART

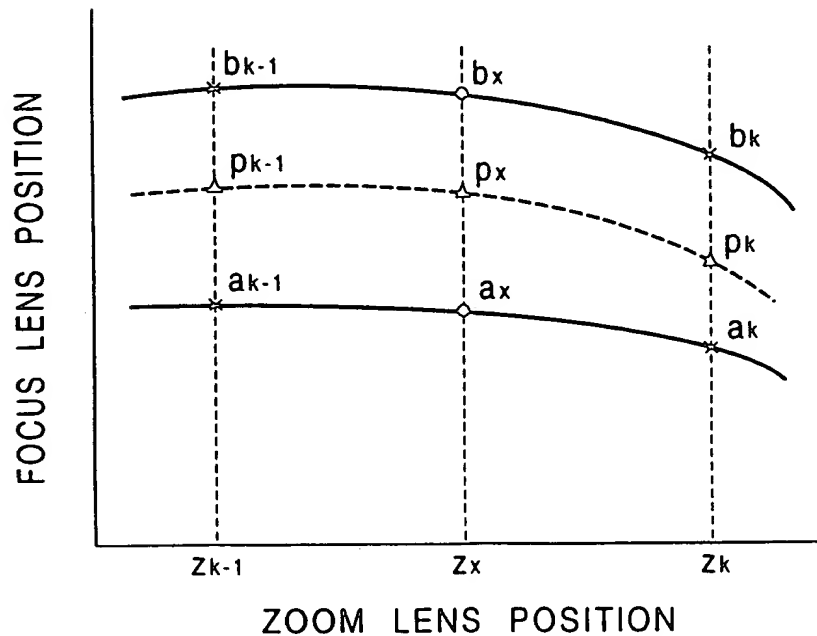




**FIG. 4**  
PRIOR ART



**FIG. 5**  
PRIOR ART

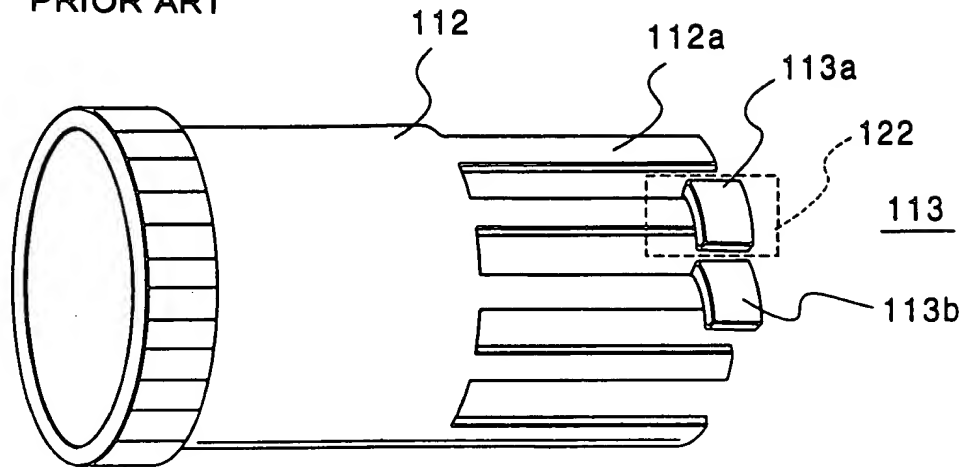


$$a_x = a_k - \frac{(z_k - z_{k-1})(a_k - a_{k-1})}{(z_k - z_{k-1})}$$

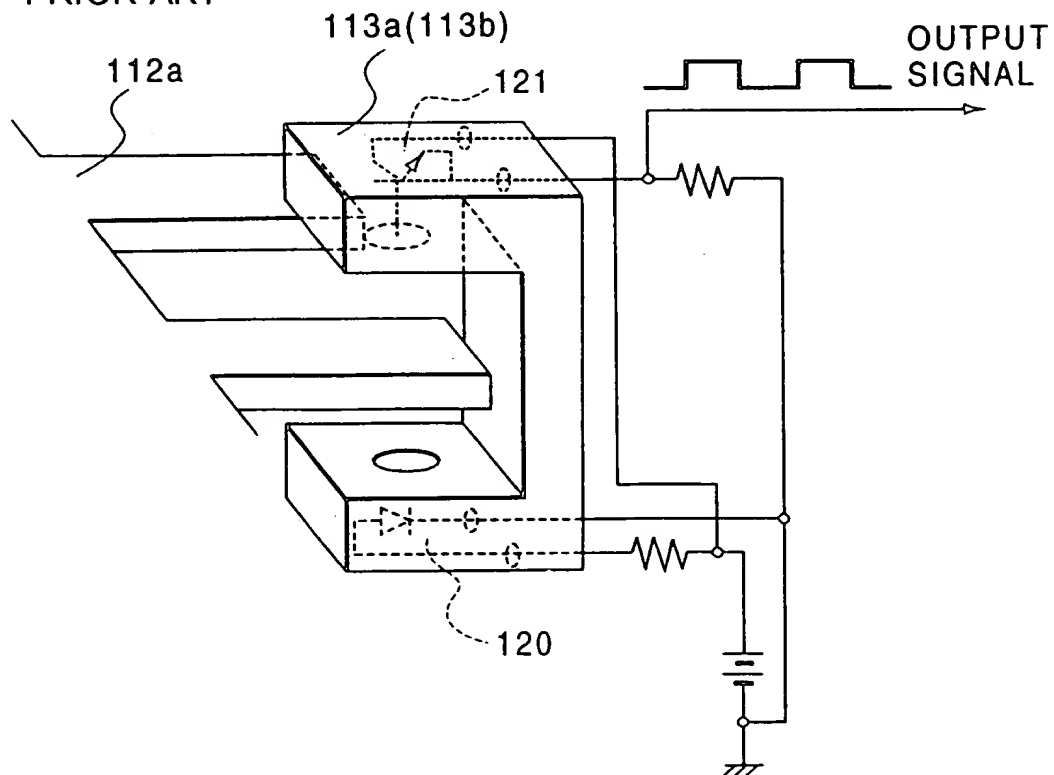
$$b_x = b_k - \frac{(z_k - z_x)(b_k - b_{k-1})}{(z_k - z_{k-1})}$$



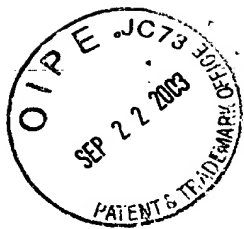
*FIG. 12*  
PRIOR ART



*FIG. 13*  
PRIOR ART



REPLACEMENT SHEET



TIME REQUIRED TO MOVE 112a  
BY ONE GEAR TOOTH (HALF PERIOD)

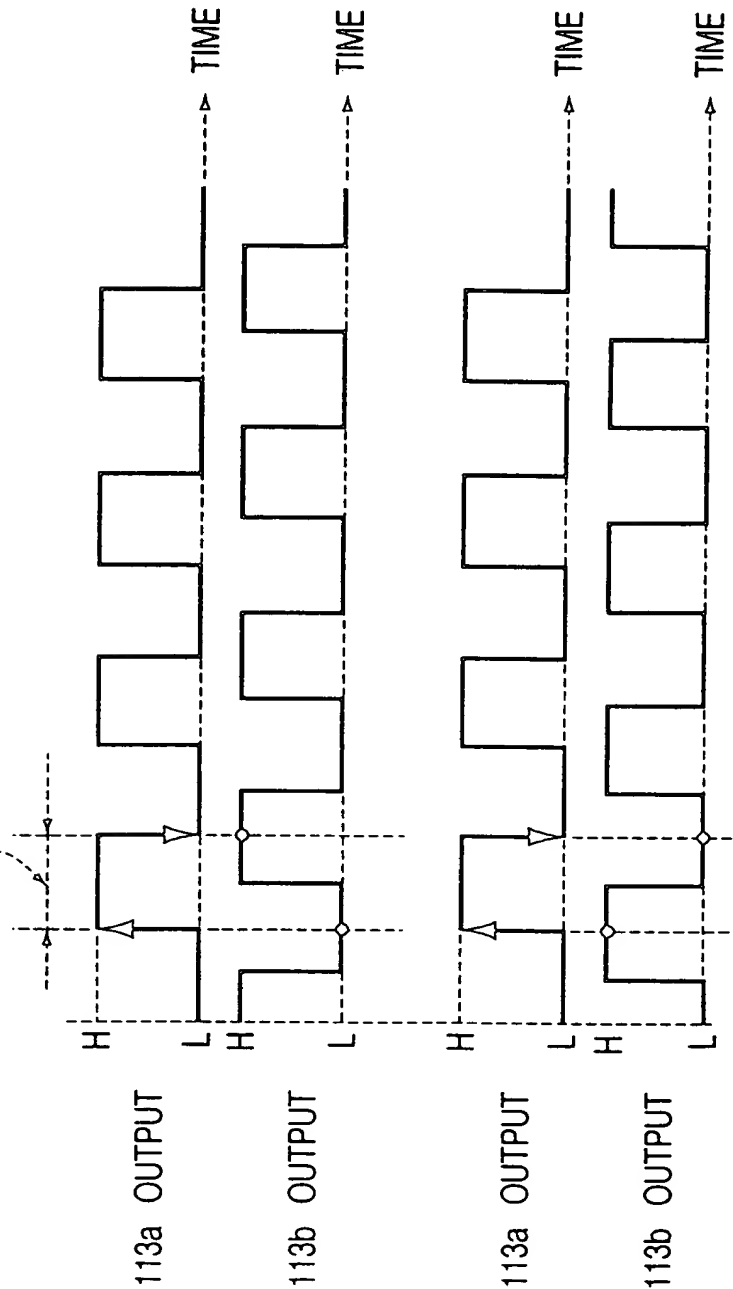


FIG. 14A  
PRIOR ART

FIG. 14B  
PRIOR ART